

**REACTION SYSTEMS FOR MAKING
N-(PHOSPHONOMETHYL)GLYCINE COMPOUNDS**

Abstract of the Disclosure

This invention generally relates to liquid phase oxidation processes for making
5 N-(phosphonomethyl)glycine (also known in the agricultural chemical industry as
glyphosate) and related compounds. This invention, for example, particularly relates
to processes wherein an N-(phosphonomethyl)iminodiacetic acid (NPMIDA)
substrate (i.e., N-(phosphonomethyl)iminodiacetic acid, a salt of N-
(phosphonomethyl)iminodiacetic acid, or an ester of N-
10 (phosphonomethyl)iminodiacetic acid) is continuously oxidized to form an N-
(phosphonomethyl)glycine product (i.e., N-(phosphonomethyl)glycine, a salt of N-
(phosphonomethyl)glycine, or an ester of N-(phosphonomethyl)glycine). This
invention also, for example, particularly relates to processes wherein an
N-(phosphonomethyl)iminodiacetic acid substrate is oxidized to form an N-
15 (phosphonomethyl)glycine product, which, in turn, is crystallized (at least in part) in
an adiabatic crystallizer.